

BOOK REVIEW

Kosciusko alpine flora. A.B. Costin, M. Gray, C.J. Totterdell and D.J. Wimbush.
Published by CSIRO, Melbourne and William Collins Pty. Ltd., Sydney, 1979.
408 pp.; 352 col. and 19 b.&w. photographs; maps. Recommended price \$25.00.

Kosciusko alpine flora is written by two alpine ecologists and one systematic botanist and is illustrated by a scientific photographer, all attached to the staff of the Commonwealth Scientific and Industrial Research Organization. It provides an ecological and floristic account of the alpine vegetation of the Kosciusko region in south-eastern New South Wales. The boundary is set at c. 1830 metres (6000 ft) altitude or, whenever the treeline extends somewhat above this level, then at the treeline. In the authors' words, "Despite its small size in relation to Australia as a whole (about 0.001%), the Kosciusko alpine area supports a rich, diverse and in part distinctive flora which compares in beauty and interest with better-known alpine floras such as those of the Rocky Mountains and the Swiss Alps".

The book has three main sections. The first of these describes the Kosciusko environment — its evolution in terms of climatic changes and geology, the history and effects of human use and abuse, and present-day management under the control of the National Parks & Wildlife Service of New South Wales. The second section introduces the plants and describes the plant communities, distinguishing eleven alliances (e.g. the *Brachycome-Danthonia* alliance; the *Carex-Sphagnum* alliance) and providing a table of these showing the dominant and the characteristic species of each and the formations (e.g. Sod tussock grassland; Fen; Heath) to which they belong. A useful six-page table lists all of the alpine vascular plants of the region, approximately 200 species and well-defined subspecies and varieties, some yet to be formally described. Additional tables give the 21 species which are currently regarded as endemic to the region and the 27 naturalized species.

The final section of the work is floristic, with clear botanical keys to families, genera and species and with the taxa arranged systematically. For each species the scientific name with authority and place of publication is given, together with a common name where one exists, a good botanical description, and paragraphs for "distribution" (worldwide) and "notes and habitat". Under the latter heading there are brief notes on the geographical and ecological occurrence within the Kosciusko region, comments on taxonomic points such as diagnostic features or unresolved problems, and a useful miscellany of ecological or biological notes whenever these are available for the species concerned, e.g. the near-extinction from grazing and burning of *Chinachloa frigida* but its subsequent recovery since 1944 when the Kosciusko summit was protected from grazing; the sensitivity to fire and the rates of growth of *Podocarpus lawrencei*; the hemi-parasitism of *Euphrasia* spp.

All sections are liberally illustrated with coloured photographs that are both artistic and informative, and add both to the beauty of the book and to the understanding of the written content. The photographs consist of carefully-selected landscapes which illustrate points discussed in the first two sections and 291 plant portraits which illustrate almost every species described in the floristic section. Cross-referencing of the descriptions and photographs is clear and direct. Several diagrams and maps complete the illustrative material, while a bibliography, a glossary of botanical terms and an index to plant names end the book.

Kosciusko alpine flora is clearly set out and well-produced. The text is authoritative and well-written and demonstrates the depth of knowledge and the wide experience of the authors in relation to their topic. Although written specifically for the Kosciusko region, much of the content is also applicable to other alpine areas of New South Wales, Victoria and Tasmania. The comprehensive bibliography of nearly 200 entries enhances the value of this flora to the serious students of plants and/or alpine regions while the wealth of photographic detail will aid and appeal to both the scientist and the amateur botanist alike. It appears that the stated aim of the authors and the photographer, "to combine scientific merit with popular appeal", has been successfully achieved.

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